

INTERNATIONAL CENTRE FOR THEORETICAL SCIENCES TATA INSTITUTE OF

FUNDAMENTAL RESEARCH

PUBLIC LECTURE

The The Ramanujan Conjecture

and some diophantine equations

One of Ramanujan's most influential conjectures concerns the magnitude of the Fourier Coefficients of a modular form. These were made on the basis of his calculations as well as a far-reaching insight as to their usefulness in the study of some diophan- tine problems. Today his original Conjecture is a Theorem and its generalizations constitute one of the central unsolved problems in number theory. We will review some of these basic developments and highlight some recent far reaching applications of his remarkable insights. DESIGN: www.qern.in

SPEAKER

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 $=q-24q^{2}+252q^{3}+...$

 $\Delta(Z) = \Sigma T(n)q^n$

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Sarnak was awarded the Polya Prize of Society of Industrial & Applied Mathematics in 1998, the Ostrowski Prize in 2001, the Levi L. Conant Prize in 2003 and the Frank Nelson Cole Prize in Number Theory in 2005. He was also elected as member of the National Academy of Sciences (USA) and Fellow of the Royal Society (UK) in 2002. He was awarded an honorary doctorate by the Hebrew University of Jerusalem in 2010.

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